

**REMARKS**

Entry of the foregoing and reexamination and reconsideration of the subject application, as amended, pursuant to and consistent with 37 C.F.R. § 1.112, are respectfully requested in light of the following remarks.

Claims 27, 32, 37, 52, 62-64, 69, 81-82, 85, 88-114, 117-118, 121-122 and 125 remain in this application. Claims 1-26, 28-31, 33-36, 38-51, 53-61, 65-68, 70-80, 83-84, 86-87, 115-116, 119-120 and 123-124 were previously canceled.

The Examiner has acknowledged applicants' RCE filed April 5, 2004. The RCE was in fact filed on March 31, 2004. However, also on March 31, 2004, Applicants' representatives received an Advisory Action; and on April 5, 2004, Remarks in Supplement to the Request for Continued Examination were filed to comment on the Advisory Action.

Claims 32, 114-118 (actually 114, 117 and 118, since 115-116 were previously canceled), 121, 122 and 125 have been rejected under 35 U.S.C. § 112, second paragraph, as indefinite. These claims have been rejected because the composition comprises at least one other product which stimulates collagen or lipid synthesis or comprises an agent for modifying skin proliferation. This is considered by the Examiner to recite a use without any active or positive steps. However, these are composition claims and steps would have no place in composition claims.

Applicants' claims have been reworded so that phrases the "product which stimulates collagen or lipid synthesis" and "agent for modifying skin proliferation" have been changed to "collagen synthesis-stimulating or lipid synthesis-stimulating product" and "skin proliferation-modifying agent", respectively. (Note that Claim 121 did not contain either criticized expression.) This makes it clear that the kind of

product or agent is what is being specified; there are no process steps, and the same meaning as originally intended is conveyed. However, it is believed that the original wording was also in keeping with the second paragraph of 35 U.S.C. § 112 and its sense would have been immediately apparent to one of ordinary skill in the art. In fact, the Examiner has had no trouble identifying the claims in question as composition claims. As to the Examiner's purported rationale for this rejection, it is respectfully submitted that it is applicants' intention to include any such agents in these claims, just so long as the compositions also comprise the other ingredients specified in the claims. Ingredient (a) is always very narrowly defined; it is not seen why the ingredients here in question need be limited to specific agents as well. A broad expression which is supported by the specification and would be understood by one of ordinary skill in light thereof, as is the case here, is not indefinite or contrary to 35 U.S.C. § 112, second paragraph. It is submitted that this rejection should not be maintained against any of the claims now in this application.

Claims 27, 82, 85, 88, 93, 96, 102 and 108 have been interpreted by the Examiner as providing for the use and/or intended use of cinnamic acid and its derivatives without reciting steps. However, as the Examiner is aware, these are composition claims, not process or method claims. Steps would have no place in composition claims. The language in question which modified "composition", that is "suitable for ..." was clearly descriptive and while not necessary is certainly not forbidden by U.S. patent law. Nevertheless, the "suitable for ..." language has been deleted, so the rejection has been rendered moot in that regard. As to the language defining the amount of cinnamic acid present, that is, "an amount effective to provide for...", this too was not contrary to U.S. law, as it was defining the amount, not

specifying a use. This language has been changed to even more clearly show that an amount is being defined; see, for example Claim 27, which now specifies "an effective skin-firming, skin-smoothing, skin-tightening or menopausal skin effect-alleviating amount" of cinnamic acid. Further, as to the criticism of Claims 1-17 under 35 U.S.C. § 101 as use claims, it is respectfully pointed out that Claims 1-17 were previously canceled. Indeed, there are no claims in the application which can now be considered as use claims. Withdrawal of the 35 U.S.C. §§ 112, second paragraph, and 101 rejections are in order and are earnestly solicited.

The present application contains eight independent claims. Applicants would like to summarize the claims before addressing the 35 U.S.C. §§ 102(b) and 103(a) rejections.

Independent Claim 27 and its dependent Claims 32, 37, 52, 69, 114, 118 and 122 are drawn to a cosmetic composition comprising (a) cinnamic acid, or a mixture or cinnamic acid and at least one derivative thereof selected from the group consisting of mono- and polyhydroxycinnamic acids, and alcohols and aldehydes of cinnamic acid, wherein cinnamic acid is present in an effective skin-firming, skin-smoothing, skin-tightening or menopausal skin effect-alleviating amount, said amount of cinnamic acid ranging from  $10^{-6}$  percent to 0.01 percent relative to the total weight of the composition, and (b) a cosmetically acceptable carrier. Dependent claims specify that the composition further comprises at least one other collagen synthesis-stimulating or lipid synthesis-stimulating product; that that product is selected from the group consisting of plant hormones, vitamin C and derivatives thereof; that the plant hormone is an auxin selected from a group of specific auxins;

that the amount of cinnamic acid is from  $10^{-3}$  percent to 0.01 percent; and/or that a skin proliferation-modifying agent and/or anti-wrinkle active agent is present.

Independent Claim 62 and its dependent claims 63, 64, 81, 117, 121 and 125 are drawn to a composition requiring (a) cinnamic acid or a mixture of cinnamic acid and at least one derivative (the derivative not being limited to those specified in Claim 27), the amount of cinnamic acid being defined as in Claim 27, (b) at least one other collagen synthesis-stimulating or lipid synthesis-stimulating product, and (c) a cosmetically acceptable carrier. Dependent claims specify some of the same features as in the claims which depend from Claim 27. The broader definition of the cinnamic acid derivative in Claim 62 allows a mixture of cinnamic acid and ethyl cinnamate (which is an ester of cinnamic acid) to fall within the scope of (a) in Claim 62 but not within the scope of (a) in Claim 27, which does not include esters as one of the enumerated derivatives.

Independent Claim 82 falls within the scope of Claim 27. Ingredient (a) in Claim 82 is limited to the compound cinnamic acid.

Independent Claim 85 falls within the scope of Claim 62. Ingredient (a) in Claim 85 is limited to the compound cinnamic acid.

Independent Claim 88 specifies that the amount of cinnamic acid is a skin-firming, skin-smoothing, skin-tightening and/or menopausal skin effect-alleviating amount and that ingredient (b) is  $\beta$ -naphthoxyacetic acid. Dependent Claims 89-92 specify amounts of cinnamic acid ranging from  $10^{-6}$  percent to 10 percent, or narrower ranges; Claim 91 specifies  $10^{-6}$  percent to 0.01 percent. The percentage of cinnamic acid present is more broadly defined in Claim 88 than in the claims that precede Claim 88 because (b) in Claim 88 is limited to  $\beta$ -naphthoxyacetic acid.

Independent Claim 93 falls within the scope of Claim 88, but limits (a) to cinnamic acid. Dependent Claims 94 and 95 specify broad ranges of percentages of cinnamic acid. Again, the amounts of cinnamic acid are more broadly defined because (b) is limited to  $\beta$ -naphthoxyacetic acid.

Independent Claim 96 and its dependent Claims 97-101 specify that (a) is cinnamic acid and ethyl cinnamate. The amount of (a) is broadly defined in Claim 96 and more narrowly defined in Claims 97-101. Claim 99 specifies an amount of cinnamic acid from  $10^{-6}$  percent to 0.01 percent, Claim 100 specifies an even narrower percentage and, Claim 101 specifies an amount of cinnamic acid of 0.01 percent and an amount of ethyl cinnamate of 0.01 percent.

Independent Claim 102 parallels Claim 96, but also requires the presence of at least one other collagen synthesis-stimulating or lipid synthesis-stimulating product. Dependent Claims 103-107 define the amount of (a) or cinnamic acid more narrowly, with Claims 105-107 paralleling Claims 99-101 as discussed above.

Independent Claim 108 also parallels Claim 96, but further requires the presence of  $\beta$ -naphthoxyacetic acid. Dependent Claims 109-113 define the amount of (a) or cinnamic acid more narrowly, with Claims 111-113 paralleling Claims 99-101 as discussed above.

We turn now to the record 35 U.S.C. § 102(b) and 103(a) rejections.

Claim 27 has been rejected under 35 U.S.C. § 102(b) as purportedly anticipated by Blank et al. U.S. Patent No. 5,837,694. Applicants respectfully submit that this rejection is based on a misreading on the Blank et al. patent and must be withdrawn.

The Examiner has correctly stated the subject matter Claim 27, in which the amount of cinnamic acid is  $10^{-6}$  to 0.01 wt%. However, Blank et al. does not teach a cosmetic composition comprising 0.01-50 wt% cinnamic acid and/or derivatives thereof such as dihydrocinnamic acid or trihydrocinnamic acid (more accurately, dihydroxycinnamic acid derivatives or trihydroxycinnamic acid derivatives). It is clearly stated in the Summary of the Invention in columns 1 and 2 of the patent that the compositions comprise a safe and effective amount of salicylic acid along with another active selected from a safe and effective amount of a sunscreen or various other additional active ingredients (anti-inflammatory agents, etc.). Sunscreens and sunblocks are discussed in part A beginning in column 3 of the patent; this is where cinnamic acid derivatives, which are sunscreens, are discussed; in column 4, lines 52-55, the amount of sunscreen is clearly stated to be from about 1% to about 20%, preferably from about 2% to about 10%. Cinnamic acid itself, always required in applicants' compositions, is not even disclosed as one of the sunscreens. Blank et al. teach 0.01-50% of their active ingredient, which is salicylic acid. Note column 4, lines 50-57; column 12, line 56 to column 13, line 45 and Claim 3. Thus, Blank et al.'s smallest sunscreen/cinnamic acid derivative amount is 100 times greater than the present Claim 27's largest amount of cinnamic acid. Not only do the percentages not overlap, but instant Claim 27's amount of cinnamic acid is not anywhere near the amount called for by Blank et al. In addition, cinnamic acid itself, which must be present herein, is not even disclosed as a sunscreen by Blank et al. Clearly, the Blank et al. patent does not anticipate Claim 27.

Claims 27, 32, 37, 62, 69, 82, 85, 88-114, 117-118, 121-122 and 125 have been rejected as purportedly unpatentable under 35 U.S.C. § 103(a) over Blank et

al. in view of the combination of Schaaf et al. U.S. Patent No. 2,791,534, Bobrove et al. U.S. Patent No. 5,962,505 and Galey et al. U.S. Patent No. 5,536,500.

The Blank et al. patent is discussed above and is deficient as a primary reference. Claim 27 and its dependent claims, Claim 62 and its dependent claims, Claim 82 and Claim 85 all require a range of from  $10^{-6}$  to 0.01 wt% cinnamic acid, (or ranges within that range); amounts far below the lower limit for Blank et al.'s sunscreen. All of applicants' claims require the presence of cinnamic acid itself, which is not even mentioned as a sunscreen by Blank et al. Claim 88 and its dependent claims and Claim 93 and its dependent claims require the presence of cinnamic acid and  $\beta$ -naphoxyacetic acid, neither of them mentioned by Blank et al. Claim 96, Claim 102 and Claim 108 and their dependent claims require the presence of both cinnamic acid and ethyl cinnamate; Claim 108 and its dependent claims require cinnamic acid, ethyl cinnamate and  $\beta$ -naphoxyacetic acid. Only ethyl cinnamate falls within the sunscreen genus described by Blank et al.

Schaaf et al. U.S. Patent No. 2,791,534 discloses compositions for treating the skin containing pregnenolone mixed with customary ingredients. Certain ingredients are said to enhance pregnenolone's action on the skin. It is pregnenolone that is taught to stimulate the epidermis (col. 1, lines 23-28), not its optional additives or enhancing agents. Among the optional enhancing ingredients are Peru balsam and the benzyl ester of cinnamic acid. There are no Examples of these particular ingredients. Furthermore, the substances in this category which are in the Examples amount to very large percentages; the ingredients used are in combination, with no single ingredient being less than .2% and the totals of such ingredients amounting to 10, 20, 40% or more. There is no reason for one of

ordinary skill to select Peru balsam, clearly not preferred by Schaaf et al., and then use it in an amount of much less than the large amounts shown by Schaaf et al. for its enhancers.

Bobrove et al. U.S. Patent No. 5,962,505 discloses a method of treating hot flashes in menopausal women by topically administering a glycopyrrolate compound. This compound is a quaternary ammonium salt. The counter ion,  $X^-$ , can be that of hydrochloric acid, hydrobromic acid, cinnamic acid or any other pharmaceutically acceptable inorganic or organic salt. Commercially available glycopyrrolate is a bromide salt; note its preparation in column 5, lines 50-56. No reason is apparent why one of ordinary skill would select a cinnamic salt from the list of possibilities, but even if selected, it would presumably be synthesized from methyl cinnamate, analogous to the last step of the commercial preparation of the bromide. Cinnamic acid itself would not even be present in the topical composition. In contrast, cinnamic acid is always present in applicants' compositions. Also, it is not the identity of the counter ion which gives the Bobrove et al. composition its utility, but the very specific structure shown in column 3.

Galey et al. U.S. Patent No. 5,336,500 describes vitamin C derivatives which are monoesters and diesters of cinnamic acids. The compositions containing these esters do not contain cinnamic acid itself or vitamin C itself as ingredients; rather, they contain new chemical compounds synthesized from cinnamic acid and vitamin C, compounds which have their own unique properties. On the contrary, applicants' claimed compositions always contain cinnamic acid itself.

One of ordinary skill would not arrive at a composition comprising cinnamic acid itself from any combination of references indicated above, much less in the

small amounts used herein, much less in combination with  $\beta$ -naphthoxyacetic acid or the simple ester, ethyl cinnamate, or the other combinations reflected by some of applicants' claims. Blank et al. motivates one of ordinary skill toward use of salicylic acid and a sunscreen. It discloses a very large percentage of sunscreen compared to applicants' amounts of cinnamic acid, and does not even disclose cinnamic acid itself as a sunscreen. Schaaf et al. motivates one of ordinary skill toward pregnenolone, Bobrove et al. toward a glycopyrrolate compound, Galey et al. toward Vitamin C monoesters and diesters of cinnamic acid. No reference or combination thereof motivates one of ordinary skill toward applicants' invention.

Claims 27, 37, 52, 63, 64, 69, 82, 85, 88-114, 117-118, 121-122 and 125 have been rejected as purportedly unpatentable under 35 U.S.C. § 103(a) in view of Blank et al., further in view of Bissett et al. U.S. Patent No. 5,487,884 and further in view of Lanzendörfer et al. U.S. Patent No. 5,952,373. Again, the primary reference is Blank et al.; for reasons expressed above, this patent does not suggest cinnamic acid itself or the instant concentration thereof. Also, with respect to the other references relied upon:

Bissett et al. is relied upon for purportedly teaching a photoprotective composition including conventional sunscreens such as derivatives of cinnamic acid and chelating agents such as 2-hydroxyphenylacetic acid. However, the amount of sunscreen is from about 1% to about 20%, preferably about 2% to 10%, far larger than the amounts encompassed by the present invention. Moreover, cinnamic acid itself, which is always required herein, is not even disclosed as one of Bissett et al.'s sunscreens. Furthermore, we find no disclosure of 2-hydroxyphenylacetic acid at column 38, lines 50-55 or indeed anywhere else in the patent; the chelating agent in

Bissett et al. can be the compound ethylenediamine-N,N-bis-(2-hydroxyphenylacetic acid), dimethyl ester, not the simple compound 2-hydroxyphenylacetic acid. Bissett et al. does not disclose 2-hydroxyphenylacetic acid *per se*.

The Examiner has not indicated why he is citing Lanzendörfer et al. We note that the compositions of Lanzendörfer et al. can contain cinnamic acid derivatives, but not cinnamic acid per se, as is always required by the instant claims.

Because none of the cited publications, either alone or in combination, discloses or suggest each and every element of the presently claimed invention or provides the motivation to obtain the presently claimed invention with a reasonable expectation of success, such cannot render the presently claimed invention obvious. Withdrawal of the § 103 rejections are therefore believed to be in order and are earnestly solicited.

The remaining references cited by the Examiner are not applied. FR 002772612A is the published version of the priority application and is not a reference against the present invention.

In view of the foregoing, applicants solicit further and favorable action in the form of a Notice of Allowance.

Respectfully submitted,

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